What is claimed is:

1. A method of manufacturing a semiconductor device, comprising the steps of:

providing a silicon layer over an insulating layer, the silicon layer including a first portion and a second portion;

partially removing the first portion of the silicon layer, wherein a thickness of the second portion is greater than a thickness of the first portion.

2. The method according to claim 1, wherein the first and second portions of the silicon layer initially have the same thickness.

3. The method according to claim 1, wherein the step of partially removing the first portion of the silicon layer includes etching the first portion.

4. The method according to claim 3, wherein the step of partially removing the first portion of the silicon layer includes depositing a resist over the silicon layer and exposing and developing the resist to expose the first portion of the silicon layer.

5. The method according to claim 3, wherein the thickness of the first portion is determined by etching the first portion for a predetermined length of time.

6. The method according to claim 1, wherein the step of partially removing the first portion of the silicon layer includes oxidizing the first portion of the silicon layer and removing the oxidized silicon.

7. The method according to claim 6, wherein the step of partially removing the first portion of the silicon layer includes depositing a mask layer and a resist over the silicon layer and exposing and developing the resist to expose a portion of the mask layer over the first portion of the silicon layer and removing the mask layer over the first portion of the silicon layer.

8. The method [illegible]

10. The method according to claim 7, wherein the mask layer is silicon nitride..

11. The method according to claim 1, wherein the isolating features are formed before the first portion of the silicon layer is partially removed.

12. The method according to claim 1, wherein the isolating features are formed after the first portion of the silicon layer is partially removed.

13. The method according to claim 1, further comprising the step of forming a first transistor in the first portion and a second transistor in the second portion.

14. The method according to claim 13, wherein the first transistor includes first source/drain regions and the second transistor includes second source/drain regions formed, and a depth of the second source/drain regions greater than a depth of the first source/drain regions.

15. The method according to claim 13, wherein the first transistor includes source/drain regions formed with a first dopant and the second transistor includes source/drain regions formed with a second dopant, and the diffusivity of the second dopant into silicon is greater than the diffusivity of the first dopant into silicon.

16. A semiconductor device, comprising:

an insulating layer;

a silicon layer over the insulating layer, the silicon layer including a first portion and a second portion;

wherein a thickness of the second portion is greater than a thickness of the first portion.

17. The semiconductor device according to claim 16, wherein a first transistor is formed in the first portion and a second transistor is formed in the second portion.

formed with a second dopant, and the diffusivity of the second dopant into silicon is greater than the diffusivity of the first dopant into silicon.

19. The semiconductor device according to claim 17, wherein the first transistor includes source/drain regions formed with a first dopant and the second transistor includes source/drain regions formed with a second dopant, and the diffusivity of the second dopant into silicon is greater than the diffusivity of the first dopant into silicon.